

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

IN RE: METHYL TERTIARY BUTYL	:	Master File No. 1:00-1898
ETHER ("MTBE") PRODUCTS	:	MDL 1358 (SAS)
LIABILITY LITIGATION	:	M21-88
	:	
	:	

This document relates to:

**Orange County Water District v. Unocal
Corp., et al., No. 04 Civ. 4968**

**DECLARATION OF TRACEY L. O'REILLY
SUBMITTED IN SUPPORT OF PLAINTIFF'S OPPOSITION TO
DEFENDANTS' MOTION FOR SUMMARY JUDGMENT
DUE TO LACK OF INJURY AND DAMAGES AT CERTAIN TRIAL SITES**

I, Tracey L. O'Reilly, declare:

1. I am one of the attorneys of record in this case for plaintiff Orange County Water District. I make this declaration from personal knowledge.

2. Attached as Exhibit 1 is a true and correct copy of excerpts of the deposition of David P. Bolin, taken in this action on July 30, 2008.

3. Attached as Exhibit 2 is a true and correct copy of excerpts of the Expert Report of Anthony Brown and Robert Stollar, served May 28, 2011.

4. Attached as Exhibit 3 is a true and correct copy of excerpts of the deposition of Anthony Brown, taken in this action on December 29, 2011, January 2, 2012, January 3, 2012, January 25, 2012 and February 1, 2012.

5. Attached as Exhibit 4 is a true and correct copy of excerpts of the deposition of Stephen W. Wheatcraft, Ph.D., taken in this action on January 17, 2012.

6. Attached as Exhibit 5 is a true and correct copy of excerpts of the Expert Report of Stephen W. Wheatcraft, Ph.D., served June 23, 2011.

7. Attached as Exhibit 6 is a true and correct copy of excerpts of the deposition of Graham Fogg, taken in this action on January 21, 2012.

8. Attached as Exhibit 7 is a true and correct copy of excerpts of the deposition of Kateri Luka, taken in this action on March 27, 2009.

9. Attached as Exhibit 8 is a true and correct copy of excerpts of the deposition of Anthony Daus, taken in this action on February 2, 2012.

10. Attached as Exhibit 9 is a true and correct copy of excerpts of the deposition of John Connor, P.E., P.G., taken in this action on January 27, 2012.

11. Attached as Exhibit 10 is a true and correct copy of excerpts of the deposition of John L. Wilson, Ph.D., taken in the *City of Fresno* on May 18, 2012.

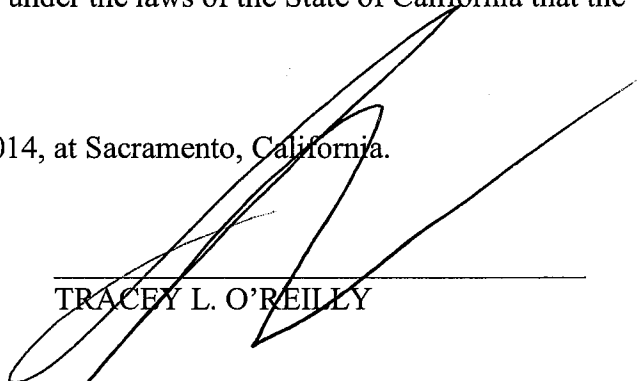
12. Attached as Exhibit 11 is a true and correct copy of excerpts of the deposition of Howard Johnson, taken in this action on August 24, 2010.

13. Attached as Exhibit 12 is a true and correct copy of excerpts of the deposition of George Murdoch, taken in this action on May 13, 2010.

14. Attached as Exhibit 13 is a true and correct copy of excerpts of the deposition of Kenneth Rudo, taken in this action on May 31, 2011.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 21st day of July, 2014, at Sacramento, California.



TRACEY L. O'REILLY

EXHIBIT 1

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Page 1

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE:

Methyl Tertiary Butyl: Master File No. 1:00-1898
Ether ("MTBE") : MDL NO. 1358 (SAS)
Products Liability : M21-88
Litigation :

This Document Relates to:
Orange County Water District
v. Unocal Corporation, et al.,
S.D.N.Y. No. 04 Civ. 4968 (SAS)

CONFIDENTIAL
(Per 2004 MDL 1358 Order)

July 30, 2008

Videotaped Deposition of DAVID P. BOLIN,
OCWD'S 30(b)(6) DESIGNEE, held in the law offices of
Latham & Watkins, 650 Towne Center Drive, Suite 2000,
Costa Mesa, California beginning at 9:05 a.m., before
Sandra Bunch VanderPol, RPR, RMR, CRR, CSR #3032.

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Page 72

1 Q. And in 9 we have four
2 Huntington Beach wells, right?

3 A. Yes.

4 Q. And there are seven stations
5 associated with it?

6 A. I see that.

7 Q. All right. Are those wells and those
8 stations and the relationship they have to those
9 three plumes, are those familiar to you?

10 A. Yes, they are.

11 Q. All right. This letter is dated
12 April of 2007. Do you recall participating in a
13 review or a study of any kind of plumes, wells and
14 stations that you believed was part of the process of
15 coming up with this list that you have before you in
16 Exhibit 2?

17 MR. MILLER: As asked -- and I believe he
18 can answer without getting into privileged matters,
19 but any attorney-client communications you had
20 shouldn't be considered in developing your answer or
21 disclosed.

22 THE WITNESS: Some of these stations -- and
23 I can't be certain which ones. Some of these
24 stations were reviewed, are part of our work that
25 Komex had provided services on. They reviewed the

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Page 73

1 files, or they provided information to, or they
2 discussed those stations with me at the time they
3 were doing the work. Some of those stations are on
4 this plume -- are on this list, associated with
5 plumes 2, 7 and 9.

6 The stations, if I understand correctly, are
7 grouped in this order because they are in proximity
8 to one another and in proximity to the wells that are
9 listed. And that's how the plumes were identified,
10 because contamination, MTBE and TBA contamination
11 specifically, identified at these sites are believed
12 to have commingled or could commingle, subsequently
13 referred to as a plume, and consequently referred to
14 as the focus plumes for the purpose of this
15 discussion.

16 BY MR. ANDERSON:

17 Q. And that's consistent with my
18 recollection, at least from my side of the table, how
19 this came together and what was represented to us by
20 Mr. Miller and his colleagues.

21 My question is -- and I appreciate
22 Mr. Miller's concern about -- I don't want to get
23 into conversations between you and Mr. Miller, or
24 other lawyers, but my foundational question is: Did
25 you personally play any role in the review and

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EXHIBIT 2

**Expert Report of Anthony Brown
and Robert Stollar**

Prepared for

Miller, Axline & Sawyer
1050 Fulton Avenue, Suite 100
Sacramento, California 95825-4272

May 28, 2011

APPENDIX B.6
Facility Summary Report
Unocal 5399
9525 Warner Avenue
Fountain Valley, California

Prepared for
Miller, Axline & Sawyer
1050 Fulton Avenue, Suite 100
Sacramento, California

May 28, 2011

Table of Contents

<i>List of Tables</i>	<i>ii</i>
<i>List of Figures</i>	<i>ii</i>
<i>List of Appendices</i>	<i>ii</i>
<i>List of Abbreviations and Acronyms</i>	<i>ii</i>
Section 1: Facility Summary	1
1.1 Identification.....	1
1.2 Characterization and Remedial Action Chronology.....	1
1.3 Hydrogeologic Issues	4
1.4 Contaminant Issues.....	4
Section 2: Hydrogeologic Conditions	5
2.1 Regional Hydrogeology	5
2.2 Local Hydrogeology	5
2.3 Local Groundwater Utilization	5
Section 3: Contaminant Fate and Transport	7
3.1 First Evidence of Release.....	7
3.2 Presence of Free Product in Groundwater.....	7
3.3 Maximum Concentrations in Groundwater	7
3.4 Lateral Delineation of Groundwater Contamination.....	7
3.5 Vertical Delineation of Groundwater Contamination.....	8
Section 4: Remediation	9
Section 5: Pathway and Receptor Summary	10

The MTBE plume was not laterally delineated at the time. No follow-up was performed after this investigation even though the leading edge of the MTBE plume had already moved off-site.

May 1997

The last groundwater sampling event before closure of the facility was conducted (UOC 48274 to 48285). While BTEX was no longer detected in on-site wells, MTBE remains present above maximum contaminant levels (MCLs), up to 66 ug/l, in down-gradient well MW-6 (UOC 55539).

The MTBE plume has never been laterally delineated, in particular in the down-gradient direction. Vertical delineation was never attempted.

September 1997

The facility was granted closure based on Santa Ana "low risk" criteria policy adopted in January 1996 (CHEVMDL 1358 00000541340 to 1358 00000541346). No TBA testing was performed.

Present (May 2011)

Based on review and evaluation of the investigation and remedial activities performed at the facility to date, the following opinions are presented:

1. MTBE and probably TBA have been released at the facility.
2. MTBE and probably TBA releases have impacted soil and groundwater beneath the facility and off-site beyond the facility boundaries.
3. To date, the responsible party has failed to delineate MTBE contamination in groundwater laterally or vertically, and additional investigation is required
4. Remediation performed to date has failed to effectively address on-site and off-site groundwater contamination, and has failed to prevent off-site migration of MTBE in groundwater.
5. Additional on-site and off-site remediation may be required to i) prevent additional migration of MTBE and/or TBA contamination through groundwater, ii) restore the groundwater resources managed by the OCWD, and iii) eliminate the threat to drinking water supplies.
6. The Orange County Water District (OCWD) will need to implement additional investigation and remediation activities at this facility to mitigate the ongoing threat to the drinking water resources managed by the OCWD
7. The absence of full plume delineation inhibits comprehensive estimates of the scope and cost of required remediation at this facility. At a minimum, however, the cost of additional investigation will be no less than \$79,050. Unit costs for subsequent investigation activities have also been developed
8. The scope and costs developed for investigation and remediation activities at G&M Oil #4 and ARCO 1905 can be used as a basis to reasonably estimate the scope and costs for the additional remediation required at this facility, once additional investigation has been performed.

APPENDIX B.10
Facility Summary Report
Beacon Bay Car Wash FV
10035 Ellis Avenue
Fountain Valley, California

Prepared for

Miller, Axline & Sawyer
1050 Fulton Avenue, Suite 100
Sacramento, California

May 28, 2011

4. MTBE has migrated off-site, beyond the facility boundaries, through groundwater movement
5. MTBE that has migrated off-site has comingled with releases from nearby facilities.
6. To date, the responsible party has failed to delineate MTBE and TBA contamination in groundwater laterally or vertically, and additional investigation is required.
7. Remediation performed to date has failed to effectively address off-site groundwater contamination, and has failed to prevent off-site migration of MTBE in groundwater.
8. Additional off-site remediation of groundwater may be required to i) prevent additional migration of MTBE and/or TBA contamination through groundwater, ii) restore the groundwater resources managed by the OCWD, and iii) eliminate the threat to drinking water supplies.
9. The Orange County Water District (OCWD) will need to implement additional investigation and remediation activities at this facility to mitigate the ongoing threat to the drinking water resources managed by the OCWD.
10. The absence of full plume delineation inhibits comprehensive estimates of the scope and cost of required remediation at this facility. At a minimum, however, the cost of additional investigation would be no less than \$79,050. Unit costs for subsequent investigation activities have also been developed.
11. The scope and costs developed for investigation and remediation activities at G&M-04 and ARCO 1905 can be used as a basis to reasonably estimate the scope and costs for any additional remediation required at this facility, once additional investigation has been performed at this facility and nearby facilities.

1.3 Hydrogeologic Issues

- First groundwater is encountered in the upper semi-perched zone within five feet of ground surface. Flow is generally to the southwest.
- Although not evaluated at Beacon Bay, investigations at neighboring facilities (i.e. ARCO #1912 and Thrifty #383), indicate that a steep downward vertical gradient generally prevails between the upper semi-perched zone and the Talbert Aquifer.
- Several wells have been identified within a quarter of a mile of the facility that could provide vertical contaminant migration pathways to deeper aquifers (i.e Talbert, Alpha, Lambda). These include wells used for agriculture and irrigation, both active and abandoned, and a regional monitoring well.
- GKAW-FV2 is the nearest potentially vulnerable production well. It is a domestic well and is located approximately 1,090 feet northwest of the facility. It is screened from 120 to 125 feet bgs down to or near the Alpha Aquifer.

APPENDIX B.16
Facility Summary Report
Unocal 5123
14972 Springdale Street
Huntington Beach, California

Prepared for
Miller, Axline & Sawyer
1050 Fulton Avenue, Suite 100
Sacramento, California

May 28, 2011

Present (May 2011)

Based on review and evaluation of the investigation and remedial activities performed at the facility to date, the following opinions are presented:

1. MTBE and TBA have been released at the facility.
2. MTBE and TBA releases have impacted soil and groundwater beneath the facility and off-site beyond the facility boundaries.
3. MTBE has been present in groundwater at the facility for more than a decade.
4. MTBE has migrated off-site, beyond the facility boundaries, through groundwater movement.
5. MTBE that has migrated off-site has comingled with releases from Huntington Beach Arco.
6. To date, the responsible party has failed to delineate MTBE and TBA contamination in groundwater laterally or vertically, and additional investigation is required.
7. Remediation performed to date has failed to effectively address on-site and/or off-site groundwater contamination, and has failed to prevent off-site migration of MTBE in groundwater.
8. Additional on-site and/or off-site remediation of groundwater may be required to i) prevent additional migration of MTBE and/or TBA contamination through groundwater, ii) restore the groundwater resources managed by the OCWD, and iii) eliminate the threat to drinking water supplies.
9. The OCWD will need to implement additional investigation and remediation activities at this facility to mitigate the ongoing threat to the drinking water resources managed by the OCWD.
10. The absence of full plume delineation inhibits comprehensive estimates of the scope and cost of required remediation at this facility. At a minimum, however, the cost of additional investigation will be no less than \$79,050. Unit costs for subsequent investigation activities have also been developed.
11. The scope and costs developed for investigation and remediation activities at G&M Oil #4 and ARCO 1905 can be used as a basis to reasonably estimate the scope and costs for the additional remediation required at this facility, once additional investigation has been performed.

1.3 Hydrogeologic Issues

- Four discrete groundwater-bearing sandy zones have been identified:
 - Upper A zone: 10–15 feet bgs
 - Lower A zone: 18-23 feet bgs
 - B zone: 30-40 feet bgs
 - C zone: 40-50 feet bgs

APPENDIX B.18
Facility Summary Report
Thrifty Oil #368
6311 Westminster Avenue
Westminster, California

Prepared for
Miller, Axline & Sawyer
1050 Fulton Avenue, Suite 100
Sacramento, California

May 28, 2011

8. Additional on-site and/or off-site remediation of groundwater may be required to i) prevent additional migration of MTBE and/or TBA contamination through groundwater, ii) restore the groundwater resources managed by the OCWD, and iii) eliminate the threat to drinking water supplies.
9. The OCWD will need to implement additional investigation and remediation activities at this facility to mitigate the ongoing threat to the drinking water resources managed by the OCWD.
10. The absence of full plume delineation inhibits comprehensive estimates of the scope and cost of required remediation at this facility. At a minimum, however, the cost of additional investigation will be no less than \$79,050. Unit costs for subsequent investigation activities have also been developed.
11. The scope and costs developed for investigation and remediation activities at G&M Oil #4 and ARCO 1905 can be used as a basis to reasonably estimate the scope and costs for the additional remediation required at this facility, once additional investigation has been performed.

1.3 Hydrogeologic Issues

- Groundwater beneath the facility occurs in a Semi-Perched Aquifer zone, with historical groundwater levels between depths of about 6.5 and 10 feet bgs. Six discrete zones have been defined in the Semi-Perched Aquifer based on Thrifty Station 368, Unocal Station 5226 (located just across Westminster Ave. to south) and Hargis CPT investigations (to bottom of CPT at 122 feet bgs):
 - ☐ Semi-perched zone-A (8–20 feet bgs)
 - ☐ Semi-perched zone-B (40–44 feet bgs)
 - ☐ Semi-perched zone-C (47–58 feet bgs)
 - ☐ Semi-perched zone-D (61–63 feet bgs)
 - ☐ Semi-perched zone-E (86–114 feet bgs)
 - ☐ Semi-perched zone-F (118–122 feet bgs)

All but two groundwater monitoring wells at Thrifty Station 368 and Unocal Station 5226 were screened across zone-A. Unocal wells MW-13s and MW-13d were screened across zones B and D, respectively. In 2010, Hargis collected Hydropunch groundwater samples in zones A, B, C and E at a location off-site adjacent to service station Unocal 5226.

- The historical prevailing groundwater gradient beneath the facility, when not affected by soil/groundwater remediation system operation, has been towards the south-southwest at an approximate gradient of 0.007. Including groundwater level data from Unocal Station 5226, the groundwater surface since 2003 has formed a westward directed trough whose axis bisects In-and-Out Burger, with groundwater flowing southward into the trough from Thrifty Station 368 and westward into the trough from Unocal Station 5226.
- Based on historical water levels from Unocal Station 5226 wells MW-9, MW-13s and MW-13d since October 2000 (first records for MW-13s and MW-13d), the direction of vertical gradients were:

EXHIBIT 3

Anthony Brown

Page 30

1 MS. O'REILLY: Vague and ambiguous.

2 Overbroad. Incomplete hypothetical.

3 THE WITNESS: As part of my work, I have not
4 offered opinions as to whether the threat to water
5 supply wells is specific to an individual well.

6 BY MR. COX:

7 Q. Specific to an individual location?

8 A. Correct. Such that, for example, let
9 us say, I have not given the opinion that a release
10 at station "X" poses a threat to water supply well
11 "B."

12 I would be -- or I have offered the opinion
13 that release at station "X" would pose a threat to
14 water supply wells but have not specified the well in
15 that opinion.

16 Q. All right. Well, I'm looking at --

17 A. And if I could just continue. And
18 this may help you somewhat.

19 Q. Okay. Go ahead.

20 A. One additional item, which I failed
21 to mention before, which we have generated and are
22 still in the process of creating is a summary table
23 that essentially summarizes my opinions as they
24 relate to each specific site.

25 And this table, along the top of each

Anthony Brown

Page 441

1 Overbroad.

2 THE WITNESS: And in particular you're
3 referencing this one opinion, the threat to water
4 supply wells?

5 BY MR. COX:

6 Q. Yes. The threat to water supply
7 wells that we've been spending a lot of time on.

8 A. In evaluating each of the specific
9 service stations, I would obviously look at the
10 historical and current contaminant concentration
11 data, groundwater flow direction, the remediation
12 activities that have occurred at the site. And based
13 upon that and potential data gaps that exist, I would
14 attempt to reach a conclusion that it is more likely
15 than not that the contaminants do pose a threat to
16 water supply wells. And that would be indicated by a
17 "Y" in the column for that particular question --

18 Q. Right.

19 A. -- or it's more likely than not they
20 don't. In which case that would be indicated by an
21 "N," that I have reached that conclusion that it's
22 more likely than not that they don't.

23 However, for most of them I could not reach
24 a conclusion either way, and it's simply possible
25 that they do. And, conversely, possible that they

Anthony Brown

Page 442

1 don't.

2 Q. So if you looked at a site, let's say
3 ARCO 6036 since we're there, and concluded it was
4 unlikely that the site posed a threat to a drinking
5 water supply, you would still give that site -- in
6 this case ARCO 6036 -- a "P," correct?

7 A. If I could not conclude that it was
8 more likely than not, I would give it a "P."
9 Assuming, again, that I could not conclude that it
10 was not more likely than not. We're getting too many
11 negatives.

12 Q. A lot of negatives here. Let's
13 assume that you concluded that it was unlikely that
14 ARCO 6036 was a threat to drinking water supply, you
15 would still give ARCO 3036 a "P," correct?

16 MS. O'REILLY: Vague and ambiguous.

17 Go ahead.

18 THE WITNESS: It actually could get a "P" or
19 an "N." We're talking generically across all of the
20 potential sites.

21 MR. COX: Okay.

22 THE WITNESS: If I was confident enough to
23 feel that it was more likely than not that it doesn't
24 represent a threat, then it would get an "N."

25 ///

Anthony Brown

Page 451

1 MS. O'REILLY: Okay.

2 BY MR. COX:

3 Q. I believe you indicated, upon further
4 reflection on my part, that you've concluded that
5 Thrifty 368 possibly poses a threat to drinking water
6 supply wells, correct?

7 A. Correct.

8 Q. All right. And which drinking water
9 supply wells are you referring to?

10 A. Those would be indicated on Figure 8.

11 Q. All right. So let me see if I can do
12 this. HELL-WM-3, is that one?

13 A. Actually, that's not a supply well.
14 That's a monitoring well.

15 Q. Okay. WM-RES2, is that the supply
16 well up there?

17 A. That is a supply well in the
18 immediate vicinity of Thrifty 368.

19 Q. Okay.

20 A. There is also a supply well
21 immediately to the south, SHAF-WM.

22 Q. Okay.

23 A. And a series of supply wells to the
24 southwest, HB-4, HB-7 and HB-13.

25 Q. Okay. And have any of those supply

Anthony Brown

Page 452

1 wells had MTBE detected in them?

2 A. No, they have not.

3 Q. Well, let's take WM-RES2. Can you
4 describe in general terms what conceptual model you
5 used to reach the conclusion that it's possible that
6 Thrifty 368 is a threat to that water supply well?

7 A. With respect to this particular
8 service station?

9 Q. Right.

10 A. While releases of MTBE and TBA have
11 occurred, the lateral extent of the contaminants both
12 historically and currently is delineated, in my
13 opinion; however, there has been no investigation of
14 the potential vertical migration of contaminants.

15 Therefore, given the absence of that
16 information, it is possible that the release at this
17 facility may have migrated vertically and could,
18 thus, pose a possible risk to water supply wells in
19 the immediate vicinity. But I have not been able to
20 conclude that it is more likely than not that the
21 releases at this facility pose a threat to these
22 water supply wells.

23 Q. I was looking for the historical well
24 data that might have identified the depth at which
25 WM-RES2 is screened. Is that part of your expert

Anthony Brown

Page 638

1 Go ahead.

2 THE WITNESS: In the context of this work,
3 the term "threat" would be defined as the
4 contamination that has resulted from a release at a
5 particular facility could potentially either impact
6 aquifers that would be used for or potentially used
7 for drinking water supply, and that's reflected in
8 question or opinion 21 on my summary table.

9 BY MR. CONDRON:

10 Q. And that's Exhibit 36?

11 A. Correct.

12 Q. Okay.

13 A. And also presents a threat to water
14 supply wells; that is, the contamination could
15 potentially impact the water supply well.

16 Q. In your report you also use the term
17 "potential threat." Do you distinguish between
18 "potential threat" and "threat"?

19 MS. O'REILLY: Vague and ambiguous.

20 THE WITNESS: We define threat in one of
21 three ways. And those would be "yes," "no" and
22 "possible." And that's the "P," for the possible.
23 And obviously "Y" and "N" for the "yes" and "no" on
24 the table.

25 As I have discussed in response to earlier

Anthony Brown

Page 639

1 questions, if we believe that it was more likely than
2 not the contamination posed a threat, then in
3 response to question No. 22, the answer would be
4 "Yes."

5 If we believe that the contamination did not
6 pose a threat, then the answer would be "No."

7 If we could not determine that it was more
8 likely than not that the contamination posed a
9 threat, but also not determine that it was more
10 likely than not that it did not pose a threat, then
11 it was left as a "Possible."

12 BY MR. CONDRON:

13 Q. Okay. That's helpful. But in your
14 report you actually use the term in several places
15 "potential threat." And I'm wondering if that's the
16 same thing as "threat," different than "threat,"
17 something else?

18 A. I do not recall the specific
19 language. As I indicated yesterday, Exhibit 36 would
20 be the opinions that I will be offering at trial.

21 Q. So this is the latest and greatest --

22 A. Correct.

23 Q. -- Exhibit 36?

24 A. Yes.

25 Q. Okay. Let me just make sure I

Anthony Brown

Page 919

1 it is more likely than not that the historical MTBE
2 plume has not been laterally delineated, correct?

3 A. That is correct, yes.

4 Q. And which directions do you think
5 additional lateral delineation is needed?

6 A. It would be to the southwest of the
7 station.

8 Q. What's the flow of groundwater on
9 this site?

10 A. If you refer to the rose diagram that
11 we prepared for Unocal 5399, it would indicate that
12 the groundwater flow direction at this facility is
13 almost exclusively to the southwest.

14 MR. JEREMIAH ANDERSON: And I just have one
15 copy of this, but can you mark that, Sandy.

16 THE REPORTER: It's 118.

17 (Exhibit No. 118 was marked.)

18 MR. JEREMIAH ANDERSON: And can you hand it
19 to the witness, please.

20 Q. Does that appear to be the rose
21 diagram you guys created for this site?

22 A. Yes.

23 Q. In your question 7 you think it's
24 possible that the investigation has failed to
25 delineate on-site MTBE contamination, but you can't

Anthony Brown

Page 920

1 say whether or not it's more likely than not,
2 correct?

3 A. That's correct.

4 MS. O'REILLY: Vague. Ambiguous.
5 Overbroad.

6 THE WITNESS: If you refer to footnote P-2,
7 there has actually been no analysis for MTBE at this
8 site since 1997.

9 BY MR. JEREMIAH ANDERSON:

10 Q. Right. And in 1997 is when this site
11 received closure?

12 A. I believe so, yes. Or shortly
13 thereafter.

14 Q. And, similarly, with question 12, you
15 think it's possible that MTBE exists beyond the
16 current monitoring well network, but you don't know
17 if that's more likely than not the case, correct?

18 A. That is correct.

19 Q. Now, you do think that the current
20 remediation has effectively addressed the on-site
21 MTBE contamination, correct? And that's question 14.

22 A. Yes. And, as indicated, the only
23 remediation activities was an excavation performed at
24 this facility back in late 1994.

25 Q. It's your opinion that no more

Anthony Brown

Page 924

1 question 21. Again, you think it's possible that
2 contamination from Unocal 5399 is a threat to the
3 deep aquifers, but you can't say whether or not it's
4 more likely than not that's the case, correct?

5 A. That's correct.

6 Q. And if I look at column 21, going
7 down all the sites, I see that it's your opinion at
8 each site that either contamination from that
9 particular site is a threat to the deep aquifers or
10 it's possible; is that fair?

11 A. Yes.

12 Q. What would it take for you to say
13 that an MTBE site is not a threat to the deeper
14 aquifers?

15 MS. O'REILLY: Vague. Ambiguous.
16 Overbroad. Incomplete hypothetical.

17 THE WITNESS: Vertical delineation, which is
18 absent at almost every site. In fact, it may be
19 absent at every site.

20 BY MR. JEREMIAH ANDERSON:

21 Q. So if I understand your answer
22 correctly, you think that an MTBE plume has to be
23 vertically delineated for you to determine that a
24 plume is not a threat to the deeper aquifer?

25 MS. O'REILLY: Vague. Ambiguous.

Anthony Brown

Page 1192

1 opinions and the estimates and the list of things that
2 you believe still need to be done at these sites was
3 exactly the same as it would have been had you been
4 retained by the responsible parties to come up with
5 plans for their sites?

6 MS. O'REILLY: Same objections.

7 Go ahead.

8 THE WITNESS: I believe so, yes.

9 BY MR. ANDERSON:

10 Q. Okay. And you don't believe that knowing that
11 Orange County Water District wanted to maximize its
12 recovery in this case had any influence on you
13 whatsoever?

14 MS. O'REILLY: Objection. Misstates facts.
15 Argumentative. Calls -- assumes facts as to Mr. Brown's
16 knowledge of Orange County Water District's legal
17 strategy. Calls for attorney-client privilege. Vague.
18 Ambiguous. Overbroad. Misstates his testimony.

19 Go ahead.

20 THE WITNESS: I cannot state whether
21 Orange County was trying to maximize its recovery, but
22 that did not have any bearing on the work that I did. I
23 just was asked to determine data gaps at the sites and
24 what work would be necessary to complete investigation
25 and remediation at these sites and determine the costs.

Anthony Brown

Page 1193

1 I did not try to consider whether they should be the
2 maximum costs that could be achievable.

3 BY MR. ANDERSON:

4 Q. Okay. So you believe you approached it the
5 same way you would if you were working for a group of
6 responsible parties who were responsible for the
7 cleanups at these stations?

8 MS. O'REILLY: Asked and answered.

9 BY MR. ANDERSON:

10 Q. Right?

11 A. That's my understanding, yes.

12 Q. Okay. And do you believe that your opinions
13 have -- in terms of the list of things that need to be
14 done at various sites, do you think that was influenced
15 at all by the fact that you would hope to get some work
16 to help clean up these sites after this case is over?

17 A. Oh, no, not at all.

18 Q. Okay. I asked you the definition of vertical
19 delineation before, and that's up and down, right?

20 A. That's correct.

21 Q. So if you go sideways, is that called lateral?

22 A. Yes.

23 Q. And do you have a definition for lateral
24 delineation?

25 A. Again, it would be the absence of contamination

EXHIBIT 4

Stephen W. Wheatcraft, Ph.D.

Page 228

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE: METHYL TERTIARY BUTYL ETHER ("MTBE")
PRODUCTS LIABILITY LITIGATION
Master File C.A. No. 1:00-1898 MDL 1358

This Document Relates to:

ORANGE COUNTY WATER DISTRICT
v. UNOCAL CORPORATION, et al.,
Case No. 04 CIV.4968 (SAS)

-- -- --
TUESDAY, JANUARY 17, 2012
-- -- --

Videotaped Deposition of STEPHEN W.
WHEATCRAFT, Ph.D., Expert Witness, Volume II, held at
the Law Offices of Latham & Watkins, 505 Montgomery
Street, Suite 2000, San Francisco California,
beginning at 9:03 a.m., before Sandra Bunch
VanderPol, FAPR, RMR, CRR, CSR #3032
-- -- --

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Stephen W. Wheatcraft, Ph.D.

Page 249

1 Q. All right.

2 A. And in this case it's my
3 understanding that there's going to be a different
4 procedure for other experts, and that -- that what
5 the District wants to do is rather than treat for
6 MTBE at the wellhead when it comes out, they want to
7 go in ahead of time and remediate the aquifer and get
8 the plume out before it ever reaches the wells. I
9 think that has to do with their -- their -- their
10 mission as it's written.

11 And so what really matters is that
12 ultimately MTBE in significant quantities get to
13 these wells. Whether it gets there a little sooner
14 or a little later, a little higher, a little lower,
15 is not so important as it was, because it doesn't
16 necessarily affect the cost estimates for experts
17 that are doing work -- the later dominoes in the
18 series, as I like to refer to them.

19 Q. Are you saying, basically, that your
20 work is showing the potential consequences if action
21 is not taken to remediate to take care of the plumes,
22 and you understood that to be your primary purpose?

23 A. Yes. And, actually, that's exactly
24 correct.

25 Q. Okay. Have you talked to any Orange

Stephen W. Wheatcraft, Ph.D.

Page 250

1 County Water District personnel about that mission?

2 A. I --

3 MS. O'REILLY: Vague and ambiguous.

4 Go ahead.

5 THE WITNESS: I have had some brief
6 conversations with Mr. Herndon, Mr. Bolin about what
7 they see their mission is and what they want to
8 accomplish. And it reflects what I just said.

9 BY MR. JON ANDERSON:

10 Q. And would it be fair to say that, in
11 general, your predicted results that you've presented
12 in your report, and some represented in your modeling
13 and document productions, illustrate a significant
14 need for action?

15 A. I think that's a fair statement.

16 Q. All right. And did Mr. Herndon or
17 Mr. Bolin explain to you that they appreciate this
18 need for action, in so many words?

19 MS. O'REILLY: Vague. Ambiguous.
20 Overbroad.

21 THE WITNESS: I don't know what you mean by
22 "appreciate."

23 BY MR. JON ANDERSON:

24 Q. Well --

25 A. They explained to me what they --

Stephen W. Wheatcraft, Ph.D.

Page 374

1 answered multiple times. Vague. Ambiguous.
2 Overbroad.

3 THE WITNESS: I will just restate my answer.
4 I haven't done any analysis to look at whether --
5 which -- to isolate or identify MTBE from a
6 particular station and whether or not or when it gets
7 to production wells.

8 BY MR. JON ANDERSON:

9 Q. What I'm trying to get at -- and you
10 acknowledge on any individual station you have no
11 specific opinion about that MTBE. And now I've given
12 you 34 stations.

13 What is the basis for you to say that one or
14 more of the 34 stations released MTBE that has gotten
15 into one or more drinking water wells?

16 MS. O'REILLY: Argumentative. Asked and
17 answered. Misstates testimony.

18 THE WITNESS: The overall behavior of the
19 model, it is showing MTBE mass moving from these
20 stations towards -- towards the wells and, in some
21 cases, having reached the wells. And there are wells
22 that have had detections. Some of these detections
23 are in the vicinity of these stations and so-called
24 plumes.

25 So it seems certainly more likely than not

Stephen W. Wheatcraft, Ph.D.

Page 375

1 that some of these stations have, in fact, impacted
2 production wells already.

3 BY MR. JON ANDERSON:

4 Q. Are you a hydrogeologist?

5 A. Yes.

6 Q. And have you used your expertise in
7 hydrogeology to formulate the opinion that one or
8 more of the 34 stations listed has, in fact, impacted
9 one or more drinking water wells with MTBE?

10 A. Yes, I have.

11 Q. Okay. And which of these stations,
12 in your opinion, has both a release and a pathway,
13 and to which drinking water wells, where you have
14 that opinion?

15 MS. O'REILLY: Asked and answered.

16 Argumentative. Misstates testimony.

17 THE WITNESS: I haven't identified -- the
18 MTBE that gets in the wells is not tagged, so I don't
19 know which station it comes from. It comes from one
20 or more stations on this list because those are all
21 the sources that are there.

22 BY MR. JON ANDERSON:

23 Q. But the 34 stations are not the
24 totality of sources in the area, right?

25 MS. O'REILLY: Objection. Asked and

EXHIBIT 5

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

**In re: Methyl Tertiary Butyl Ether ("MTBE")
Products Liability Litigation**

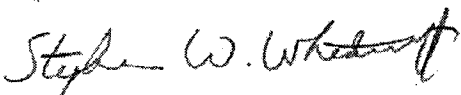
**Master File No. 1:00-1898
MDL 1358 (SAS)
M21-88**

This Document Relates To:

*Orange County Water District v. Unocal Corp., et al.,
No. 04 Civ. 4968*

EXPERT REPORT OF STEPHEN W. WHEATCRAFT, Ph.D.

Wheatcraft & Associates
Reno, Nevada



June 23, 2011

Signature

Date

The purpose of this expert report is to explain the methodology employed in constructing and running groundwater flow and MTBE transport models, and to provide an opinion regarding the results of these models. I was asked to determine whether any releases of MTBE gasoline from 34 pre-selected stations had or would reach drinking water wells within Orange County Water District's service area. I was also asked to provide an opinion as to the mobility, fate and transport and persistence of any MTBE that was released within the Orange County Water District service area. My opinions are as follows:

1. A significant amount of MTBE has been released to groundwater within the Orange County Water District's service area.
2. MTBE was likely in groundwater for years before any sampling for MTBE occurred.
3. This MTBE, if not remediated, will impact water production wells in OCWD's service area. MTBE has already been detected in a number of wells.
4. Groundwater remediation at the focus plume stations I reviewed has not prevented off-site migration of MTBE.
5. At the stations I reviewed, MTBE was in groundwater for years before groundwater remediation was initiated. At most stations, MTBE was in groundwater for more than a decade before groundwater remediation began.
6. The average time from known release to the start of remediation is 11 years, and the longest time between known release and start of remediation is 22.5 years.
7. MTBE is highly mobile and persistent in groundwater and groundwater is continuously in motion. As a consequence, MTBE released at the focus plume stations would have begun migrating off site as soon as it entered groundwater.
8. The MTBE transport model predicts (details are in Appendices B and D):
 - a. 190 district production wells exceed 0.2 ug/l MTBE after 10 years
 - b. 19 additional district production wells exceed 0.2 ug/l MTBE after 20 years
 - c. 28 additional district production wells exceed 0.2 ug/l MTBE after 30 years
 - d. 19 additional district production wells exceed 0.2 ug/l MTBE after 40 years
 - e. 108 district production wells exceed 5.0 ug/l MTBE after 10 years
 - f. 26 additional district production wells exceed 5.0 ug/l MTBE after 20 years
 - g. 10 additional district production wells exceed 5.0 ug/l MTBE after 30 years
 - h. 11 additional district production wells exceed 5.0 ug/l MTBE after 40 years
9. Clay layers within the OCWD service area will not prevent MTBE from migrating vertically down to deeper aquifers. Clay layers slow, but do not stop downward migration. In addition, clay layers within OCWD's service area have been perforated by numerous wells that act as conduits to deeper aquifers.

EXHIBIT 6

Graham E. Fogg, Ph.D.

Page 1

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE: METHYL TERTIARY BUTYL ETHER ("MTBE")
PRODUCTS LIABILITY LITIGATION
Master File C.A. No. 1:00-1898(SAS) MDL 1358

This Document Relates to:

ORANGE COUNTY WATER DISTRICT
v. UNOCAL CORPORATION, et al.,
Case No. 04 CIV.4968 (SAS)

-- -- --
SATURDAY, JANUARY 21, 2012
-- -- --

Videotaped Deposition of GRAHAM E. FOGG, Ph.D.,
Expert Witness, held at the Law Offices of Latham &
Watkins, 505 Montgomery Street Street, Suite 1900,
San Francisco, California, beginning at 9:03, before
Sandra Bunch VanderPol, FAPR, RMR, CRR, CSR #3032

-- -- --

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Graham E. Fogg, Ph.D.

Page 110

1 network, then -- then that would indicate that people
2 are -- the companies are already doing as much as
3 they can or as much as should be done to protect the
4 groundwater resources.

5 BY MR. JON ANDERSON:

6 Q. My question is a little bit different
7 than that. And I'm focusing on the 34 stations that
8 are part of this case.

9 Do you have an opinion that something more
10 than local site cleanup is needed with respect to all
11 or any of those stations?

12 MS. O'REILLY: Objection. Misstates
13 testimony. Misstates reports. Exceeds the scope of
14 designation.

15 THE WITNESS: My opinion is not with respect
16 to specific stations. But my opinion is that there
17 is significant MTBE mass beyond the monitoring well
18 networks, and what one chooses to do about that is
19 dependent on other factors that are not part of my
20 scope of work or my opinions.

21 So you either try and clean up the
22 contamination before it gets to supply wells or you
23 clean it up at the supply wells or you find another
24 source of water. Right.

25 So, basically, there's three choices. Those

EXHIBIT 7

Deposition of Kateri Luka, Vol. II / March 27, 2009

Page 194

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE SOUTHERN DISTRICT OF NEW YORK

3
4
5 IN RE: METHYL TERTIARY BUTYL) Master File No. 1:00-1898
6 ETHER ("MTBE") PRODUCTS) MDL 1358 (SAS)
7 LIABILITY LITIGATION) M21-88

8 This document relates to:)
9 Orange County Water District)

10 vs.)

Case No. 04 Civ. 4968
VOLUME 2

11 Unocal Corporation, et al.,)
12 _____)
13
14

15 DEPOSITION of KATERI LUKA, taken on
16 behalf of the Defendants at 777 So. Figueroa
17 Street, Conference Room 45-A, Los Angeles,
18 California, commencing at 9:09 a.m., Friday,
19 March 27, 2009, before Nanci L. Grube, CSR No.
20 3446, pursuant to Notice.
21
22
23
24
25

1 the wells were installed in the extent -- the vertical
2 extent has been assessed.

3 Q. And were the samples taken from those wells
4 non-detect?

5 A. There were a lot of non-detect results from
6 those wells.

7 Q. And what wells were you referring to?

8 A. I am referring to well B-19, B-20, B-21 and
9 B-26.

10 Q. When was the last time ARCO sampled those
11 wells?

12 A. Sampling activities have been conducted as
13 recent as December 22nd, 2008. And give me a second to
14 make sure that's correct for all of those wells that I
15 just mentioned.

16 For well B-21, the last date that well was
17 sampled was March 25, 2008, and for well B-26 the last
18 sampling date was September 10 of 2008.

19 Q. So is it your testimony that the completion of
20 those -- installation of those wells completed the
21 vertical assessment of the MTBE plume of Arco 1912?

22 A. Yes.

23 Q. And when did ARCO complete the horizontal
24 assessment of the MTBE plume at 1912?

25 A. I don't have an exact -- I don't have a date

1 for you on that. This is a complex site in that we have
2 commingling of plumes. We have another station across
3 -- there is another station across the street known as
4 Thrifty, and next door on the same side of the street to
5 us is the Beacon Bay station. So there is commingling
6 that's going on. A lot of assessment has been done,
7 and as you know or I have mentioned, that the site is
8 currently under remediation. So it's a process that,
9 you know, the site has been under, and I don't have an
10 exact date for that.

11 Q. Has -- to your understanding, has horizontal
12 delineation of the MTBE plume at ARCO 1912 been
13 completed as of today?

14 A. With the work that has been going on
15 especially at the direction of the Orange County Health
16 Care Agency, I would say that it is -- that no
17 additional work has been required off -- to install more
18 wells and that the wells that are currently there are
19 being monitored through remediation, so there is not an
20 actual date of completion.

21 MS. WEIRICK: Tracey could be the court reporter,
22 too. You could save yourselves some money.

23 Is that it for 1912?

24 MS. O'REILLY: Yes. Sorry.

25 Q. And one other pending question was whether you

EXHIBIT 8

Deposition of Anthony Daus, Vol. II / February 2, 2012

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE: METHYL TERTIARY BUTYL : Master File No.
1:00-1898
ETHER ("MTBE") PRODUCTS : MDL 1358 (SAS)
LIABILITY LITIGATION : M21-88

ORANGE COUNTY WATER DISTRICT

v.

UNOCAL CORP., et al. VOLUME II
Case No. 04 Civ. 4968 (SAS) Pages 249 - 476

VIDEOTAPED DEPOSITION OF ANTHONY DAUS
Thursday, February 2, 2012 9:19 a.m.

LOCATION: 355 S. Grand Avenue, Suite 3H
Los Angeles, California 90071-1560

REPORTED BY: Debra Kottke, C.S.R. #7422
Registered Professional Reporter

1 MR. COX: Vague.

2 MR. JEREMIAH ANDERSON: Are you talking about in
3 1998 did he do this analysis?

4 THE WITNESS: I didn't do any analysis.

5 BY MS. O'REILLY:

6 Q. So, in terms of your opinion that the air
7 sparging system promoted biodegradation of MTBE,
8 you're relying on your general knowledge of MTBE
9 biodegradation?

10 A. Yes, and that, you know, we did find TBA at
11 concentrations, elevated concentrations, but the data
12 record isn't complete enough to assess concentrations
13 prior to the sparge system.

14 Q. Did the sparge system provide hydraulic
15 control of the MTBE being detected in the areas of
16 MW-6 and MW-7?

17 A. Hydraulic control, a sparge system wouldn't
18 do that, hydraulic control.

19 Q. Would that contamination continue to migrate
20 with groundwater off the Beacon Bay Santa Ana
21 property?

22 MR. COX: Vague.

23 THE WITNESS: Some MTBE that's not broken down
24 would continue to migrate.

25 \\\\\\

1 BY MS. O'REILLY:

2 Q. Do you know how far it would have migrated?

3 A. No.

4 MR. COX: Vague, ambiguous, incomplete
5 hypothetical. Go ahead.

6 BY MS. O'REILLY:

7 Q. Do you know what concentration would have
8 migrated?

9 MR. COX: Same objections.

10 THE WITNESS: MW-8 is downgradient of southwest
11 and downgradient of -- I think underground fuel
12 tanks.

13 BY MS. O'REILLY:

14 Q. Okay.

15 A. And MTBE was detected at relatively low
16 concentrations in MW-8 up to 26, 28, looks like the
17 highest is 28 parts per billion.

18 Q. Are you talking about MW-8?

19 A. Yes.

20 VIDEO OPERATOR: Five minutes left on the disk.

21 MS. O'REILLY: Okay.

22 BY MS. O'REILLY:

23 Q. Are you saying that the concentrations --
24 let me make sure I understand your testimony because
25 my question was, do you know what concentrations

1 migrated off-site of the Beacon Bay Fountain Valley
2 that were being detected in 6 and 7?

3 A. Oh, it was in reference to 6 and 7?

4 Q. Yes, sorry.

5 A. I'm sorry, I thought it was more about the
6 air sparge system. The MW-7, I don't believe there's
7 a well downgradient of MW-7 and MW-6. MW-11 hadn't
8 been installed yet and MW-3 had very limited
9 sampling.

10 Q. So, you can't tell what concentration
11 migrated off-site from that area?

12 MR. COX: Vague.

13 THE WITNESS: I can't -- well, I can't tell what
14 migrated off-site, how much or --

15 BY MS. O'REILLY:

16 Q. How far?

17 A. Or how far.

18 Q. With respect to, very quick because I might
19 almost be done with this. With respect to MW-8 it
20 had a concentration of 2,270 parts per billion in
21 August 1996, correct, high concentrations?

22 A. Yes, when it was first installed it had a
23 very high concentration that was a one-time
24 detection. It wasn't a repeated detection.
25 Concentrations prior to that were 64 parts per

EXHIBIT 9

Page 1

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

-oOo-

In re: Methyl Tertiary Butyl
Ether ("MTBE") Products
Liability Litigation

Master File No.
1:00-1898

This Document Relates To:

Orange County Water District
v. Unocal Corporation, et al.,
Case No. 04 Civ. 4968

Case No.
MDL 1358(SAS)

DEPOSITION OF JOHN CONNOR, P.E., P.G.
January 27, 2012 at 9:00 (9:07) a.m.

Before: ERIC L. JOHNSON
RPR, CSR #9771

Taken at:
San Francisco, California

1 semi-perched zone. And at the -- the last paragraph in
2 that section, you -- yeah.

3 It says, "Due to the poor natural quality of
4 the water contained in this zone, e.g., elevated total
5 dissolved solids, TDS, the groundwater is not used for
6 drinking water supply." And you cite DWI 1967.

7 Do you see that?

8 A. Yes.

9 Q. Is it your opinion that the groundwater on the
10 semi-perched zone is -- is non-beneficial use?

11 MR. ANDERSON: Objection; vague.

12 THE WITNESS: It depends on which beneficial
13 use you are referring to.

14 MS. O'REILLY: Q. Do you understand the term
15 "beneficial use" as it is used by the Regional Water
16 Quality Control Board and the State Water Resources
17 Control Board?

18 A. Yes.

19 MR. ANDERSON: Objection; calls for
20 speculation.

21 MS. O'REILLY: Q. Is the shallow aquifer in
22 Orange County designated for non-beneficial use, in your
23 opinion?

24 MR. ANDERSON: Objection; vague.

25 THE WITNESS: That's a different question.

1 The -- the groundwater in the semi-perched unit
2 is subject to the groundwater protection regulations
3 that are implemented by the state water -- the State
4 Water Resources Quality Control Board and so the water
5 is subject to remediation. The standards that they
6 apply to that, under water quality objectives, are more
7 stringent than drinking water standards.

8 The statement that's made by the Department of
9 Water Resources in 1967, and has been affirmed in many
10 publications since that time, is that the water is not
11 used. In fact, the study that was done, published in
12 1967 for that, state there is a -- there is an internal
13 memorandum that indicates that the last well that drew
14 water from that unit had been removed by that time and
15 it is not -- it is not used out there.

16 MS. O'REILLY: Q. Is that aquifer designated
17 for non-beneficial use, in your opinion?

18 MR. ANDERSON: Objection; vague.

19 THE WITNESS: I guess I am unclear on your
20 question. I think I have answered that.

21 It is not -- it is not -- it is -- it is
22 subject to the protection for the future potential
23 beneficial uses, subject to protection and remediation
24 as if it were a drinking water aquifer. My statement
25 here is that it is not used as a drinking water aquifer.

1 MS. O'REILLY: Q. So is it fair --

2 A. That's been affirmed by the Department of Water
3 Resources and many others.

4 Q. So it is fair to say --

5 A. It is not used as drinking water.

6 Q. So the State Water Resources Control Board
7 still treats the semi-perched aquifer in Orange County,
8 within the pressure area, as a beneficial use aquifer
9 for potential for drinking water, correct?

10 A. They apply the same standards as they apply to
11 waters that are amenable to use as a drinking water.
12 That is not to say that they recognize it as a local
13 water resource that's being used by the people or could
14 reasonably be used. In the 1967 publication by the
15 Department of Water Resources, they note that
16 it had -- that the water is a poor quality for salinity.
17 But the principal limitation on using water from that
18 unit is it is low yield. There's -- you can't get any
19 water out of it. So that's why it is -- that's why it
20 is not feasible, you know, there were some old windmills
21 in there in the past in some of the early ranches --

22 Q. What's your --

23 A. -- but it is not used.

24 Q. What's your basis for saying it is low yield?

25 A. It is the nature of the sediments that are in

1 So I have marked as Exhibit 6 a State of
2 California Resources Agency Department of Water
3 Resources Southern District progress report on
4 groundwater geology of the coastal plain of Orange
5 County dated July 1967.

6 Q. And that is one of the documents that you
7 relied on in forming your opinions concerning the
8 usability of the semi-perched zone as a drinking water
9 aquifer in Orange County?

10 A. You said that I used it for characterization --

11 Q. Is it one -- is it one of the documents that
12 you relied on -- well, let me -- let me first ask it
13 this way: That you relied on in order to form your
14 opinions concerning the geology and hydrogeology of the
15 semi-perched zone in Orange County.

16 A. It is one of the documents that I relied upon,
17 yes.

18 Q. And if I understand your testimony, you relied
19 on that document to form the opinion that the water in
20 the semi-perched zone is not appropriate for use as
21 drinking water?

22 MR. ANDERSON: Misstates his opinions.

23 THE WITNESS: No, that's not what I said. What
24 I said is simply that this document says that the water
25 in the semi-perched zone is of high TDS and -- which is

1 a low quality of water, and there are many other
2 documents that I have said that identify that the
3 semi-perched zone is principally clays or silts. I
4 don't think that's subject to argument. And they are
5 low yield. And I have explained to you that that's
6 another reason -- likely reason it is not used. It is
7 not to say that it is not looked upon as a potential
8 water that's protected, subject to the board. The board
9 does protect this unit. It treats it as if it were
10 drinking water, even though it is not, under a very
11 conservative policy that they have.

12 MS. O'REILLY: Q. So it is fair to say that
13 the State of California -- the State Water Resources
14 Control Board still designates a semi-perched aquifer as
15 a beneficial use aquifer, correct?

16 MR. ANDERSON: Objection; vague; overbroad.

17 THE WITNESS: I'm not sure that that -- I am
18 not sure that that is -- that they have designated it as
19 a beneficial use aquifer.

20 What I am saying is that they -- subject to
21 their criteria, this -- the salinity in this unit isn't
22 high enough for it to be excluded. There is a 1989
23 document, Aquifer Classification Guide, issued by
24 U.S. EPA, which was a guidance to the states, which a
25 number of the states have adopted, that identifies the

EXHIBIT 10

Deposition of John Wilson, Ph.D. / May 18, 2012

Page 1

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

-oOo-

In re: Methyl Tertiary Butyl
Ether ("MTBE") Products
Liability Litigation

Master File No.
1:00-1898

This Document Relates To:

City of Fresno
v. Chevron U.S.A. Inc., et al.,
Case No. 04 Civ. 4973

Case No.
MDL 1358(SAS)

DEPOSITION OF JOHN WILSON, Ph.D
May 18, 2012 at 9:00 (9:08) a.m.
Before: ERIC L. JOHNSON
RPR, CSR #9771

Taken at:
Los Angeles, California

1 relationship between the detections of MTBE reported by
2 Friedman & Bruya and the maximum contaminant levels for
3 MTBE.

4 Is it your opinion that because those
5 detections were orders of magnitude below the MCL that
6 MTBE wasn't present in those wells?

7 MR. ANDERSON: Objection; vague.

8 THE WITNESS: I never used words to that
9 effect. I reported the numbers that had been reported
10 by the people doing the analysis and related it to the
11 MCL.

12 MS. O'REILLY: Q. Did you determine the MTBE
13 detected in City of Fresno wells came from some source
14 other than gasoline?

15 A. Well, if MTBE is present in the wells, as those
16 samples seem to indicate, then it is much more likely
17 than not they came from gasoline.

18 Q. In your report, you talk about a drop in the
19 water levels in the City of Fresno during the last 20
20 years.

21 Is it fair to say that drop is somewhere
22 between 20 to 40 feet across the City of Fresno?

23 MR. ANDERSON: Objection; vague.

24 THE WITNESS: I don't recall. The maximum may
25 be somewhat more than 40 feet, but not much more. And I

1 Q. Would you consider it fair to say that all
2 groundwater is vulnerable to contamination?

3 MR. PARKER: Objection; vague, ambiguous,
4 incomplete hypothetical.

5 THE WITNESS: There is groundwater which has
6 ages that are quite old, that is not involved with a
7 mixture of young and old, that are not vulnerable to
8 contamination. I worked in the Nubian sandstone of
9 Egypt, that water is 26- to 30,000 to 100,000 years old,
10 depending on the measurement. It is not vulnerable to
11 contamination.

12 MS. O'REILLY: That's all the questions that I
13 have.

14 MR. ANDERSON: Thank you.

15 THE VIDEOGRAPHER: This concludes today's
16 proceeding in the deposition of John Wilson. The number
17 of videotapes used is three. We are now going off the
18 record. The time is 3:36 p.m.

19 (Whereupon the deposition of JOHN WILSON,
 Ph.D concluded at 3:36 p.m.)

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EXHIBIT 11

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Page 1

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE:

Methyl Tertiary Butyl: MDL NO. 1358 (SAS)
Ether ("MTBE") : M21-88
Products Liability :
Litigation :

This Document Relates to:

Orange County Water District
V. Unocal Corporation, et al.,
S.D.N.Y. No. 04CIV.4968 (SAS)

CONFIDENTIAL - (PER 2004 MDL 1358 ORDER)

TUESDAY, AUGUST 24, 2010

Videotaped Deposition of HOWARD JOHNSON, City of
Huntington Beach's 30(b)(6) designee, held in the Law
Offices of Latham & Watkins, 650 Town Center Drive,
Suite 2000, Costa Mesa, California, beginning at 9:01 a.m.

Reported by:

Sandra Bunch VanderPol, CSR #3032
Certified Realtime Reporter
Registered Merit Reporter
Realtime Systems Administrator credentialed
Fellow, Academy of Professional Reporters

GOLKOW TECHNOLOGIES, INC.
877.370.3377 ph|917.591.5672 fax
deps@golkow.com

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Page 120

1 BY MR. ANDERSON:

2 Q. Has Huntington Beach ever installed
3 any treatment facilities to treat for 1,4-dioxane in
4 the groundwater?

5 A. No.

6 Q. And so Huntington Beach is -- or was
7 still serving water to the public even though it had
8 these 1,4-dioxane detections in it that we saw in
9 Exhibit 20?

10 A. Yes.

11 Q. Has Huntington Beach sought any money
12 from OCWD as a result of the 1,4-dioxane detections
13 in its wells?

14 A. No.

15 Q. At what depth did the Huntington
16 Beach wells generally draw from?

17 MS. O'REILLY: Vague. Ambiguous.
18 Overbroad.

19 THE WITNESS: They are all different but
20 somewhat the same. We usually perforate our wells
21 from the upper zone to the lower zone. So we --

22 BY MR. ANDERSON:

23 Q. How -- I'm sorry. Go ahead.

24 A. We do have some smaller wells that
25 only go to approximately two, 300 feet. So those are

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Page 121

1 obviously the upper zone. But the majority of our
2 wells are between five and seven, five and 800 feet.

3 Q. Do any of your wells draw water from
4 the shallow aquifer?

5 A. Yes.

6 Q. Which wells are those?

7 A. Well No. 1.

8 Q. And at what level -- or what depth
9 does it draw from?

10 A. 180. So it's probably perforated
11 from 100 to -- it's a very small well. 100 to 180.

12 Q. And do you know how many consumers
13 Well No. 1 serves?

14 A. Well, mathematically I could do that
15 for you. It's about -- there's about 350 gallons a
16 minute, and we have 2.63 persons per household that
17 use an average of 106 gallons per person per day.

18 So I would say that it would just take care
19 of the tract in the immediate area.

20 Q. Has Huntington Beach ever used
21 packers at -- are you familiar with the term
22 "packers"?

23 A. Yes, I am.

24 Q. Can you tell me what you understand
25 that to mean?

EXHIBIT 12

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Page 1

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

In Re: Methyl Tertiary Butyl :
Ether ("MTBE") : Master File C.A. No. 1:00-1898
Products Liability : MDL NO. 1358 (SAS)
Litigation :
_____ :

This document relates to the :
following case: :

Orange County Water District :
v. Unocal Corp., et al, :
04 Civ. 4968 (SAS) :
_____ :

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MAY 13, 2010

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Videotaped Deposition of GEORGE MURDOCH,
Corporate Representative for the City of Newport Beach,
held at 650 Town Center Drive, 20th Floor, Costa Mesa,
California, commencing at 10:13 a.m., on the above date,
before Kimberly S. Thrall, a Registered Professional
Reporter and Certified Shorthand Reporter.

Golkow Technologies, Inc.
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Page 161

1 them.

2 Q. Right. And according to the presentation made
3 by OCWD, the injection wells from the Talbert Barrier
4 send water down and influence the Beta and the Lambda
5 Aquifer, correct?

6 A. According to this presentation, yes.

7 Q. Do you know the aquifers from which the TAMD
8 and TAMS wells produce from?

9 A. No, I don't recall them as a name. We call
10 them deep and shallow aquifers. So, no, I am not -- I
11 have not referenced our aquifers that we draw our water
12 from by these names.

13 Q. And if you look on page 4, there's a map. It
14 says, "Modeling indicated that the inactive wells, when
15 operating, capture the majority of the injection water
16 in the Beta, Lambda Aquifers."

17 Do you see that?

18 A. Yes.

19 Q. Were you aware that OCWD had done some modeling
20 to determine the aquifers from which Newport Beach's
21 wells draw?

22 A. No. As a matter of fact, I don't know what the
23 word "modeling," whether it's computer or if it's
24 hydraulic modeling. There's no reference in this
25 document that states what type of modeling that is.

EXHIBIT 13

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

**In re: Methyl Tertiary Butyl Ether ("MTBE")
Products Liability Litigation**

**Master File No. 1:00-1898
MDL 1358 (SAS)
M21-88**

This Document Relates To:

*Orange County Water District v. Unocal Corp., et al.,
No. 04 Civ. 4968*

EXPERT REPORT OF KENNETH RUDO

Chapel Hill, North Carolina

A handwritten signature in black ink, consisting of several vertical strokes followed by a horizontal line and a large loop.

Signature

May 31, 2011

Date

from May, 2010, on which I have only done a preliminary review, as well as additional formaldehyde data I am currently reviewing. My curriculum vitae is attached at the end of this report.

II. Key Opinions

A. Based on the information in the scientific literature, MTBE is a genotoxic carcinogen and as such, has no safe level of exposure, especially in drinking water. Any exposure can result in an increased long-term risk of cancer for humans.

B. MTBE is metabolized to formaldehyde, a known human carcinogen and a known human leukemogen, as well as a genotoxic carcinogen. MTBE causes lymphomas and leukemias in animal studies and formaldehyde causes leukemias in animal studies. The link between MTBE and formaldehyde described above indicates that because MTBE is metabolized to formaldehyde, which is a known human carcinogen, then MTBE from a toxicological standpoint may be considered a chemical that can cause cancer in humans in the absence of human epidemiological studies for MTBE. This information further supports the opinion that MTBE is a genotoxic carcinogen and as such has no safe level of exposure.

C. MTBE poses an increased human health risk due to the potential for exposure in drinking water. Throughout the United States there are numerous public and private drinking water wells contaminated with MTBE, and from 1979 to the present, there were leaking underground storage tanks (USTs) that allowed MTBE and other gasoline compounds to get into groundwater aquifers and from there to contaminate public and private drinking water wells.

D. At this point in time, every MTBE animal cancer study I have reviewed in its entirety or from a preliminary standpoint has found statistically significant levels of cancer from MTBE exposure. There are no negative studies.

E. MTBE in drinking water poses an increased human health risk due to the avenues of exposure when a drinking water supply is contaminated. There is significant exposure from ingestion, bathing, showering, and whole house exposure due to the volatility of MTBE.

F. For over 22 years as the North Carolina State Toxicologist I have evaluated thousands of private well water and public drinking water supplies contaminated by MTBE in North Carolina. Based on these investigations, I have observed that human exposure to MTBE contaminated drinking water can result in non-cancer adverse effects as well as cases where MTBE may have been linked to cancer in people exposed to MTBE contaminated drinking water.

III. Supporting Opinions

A. The use of bright line drinking water standards for MTBE required by states and for chemicals in general by the federal government is necessary from a regulatory standpoint but still results in increased long-term health risks to humans based on the scientific literature. The only completely protective MTBE standard for public health based on the scientific literature is zero. Information will be presented in this report supporting this opinion.

B. MTBE should not have been used in gasoline starting in 1979 and should not have had an increased use in oxygenated fuel programs in the late 1980s and the 1990s due to the knowledge possessed by the petroleum industry of the potential health risks associated with exposure to